REMARKS AND ARGUMENTS

Status of the claims

Claims 1, 4-8 and 17-22 are under examination and rejected. Claims 9-16 have been previously withdrawn from consideration.

Claim objections

Claims 1 and 19 are objected to for containing typographical errors. Applicant has corrected claims 1 and 19 as suggested by Examiner, i.e. deleted the commas after 'engineered' and before "mitigating".

Indefinite claims

Claims 6 and 8 are indefinite for failing to further limit claim 1 on which they depend. Applicant has canceled claims 6 and 8 whereby the rejection is no more relevant.

Claims 18 and 20 are indefinite for employing improper Markush terminology. Applicant has amended claims 18 and 20 so as to overcome this rejection.

Claims 21-22 are indefinite in their recitations of "herbicide resistance is a *ahas*^{R}", "dwarfism is a delta *gai*" and "shattering is a *shatterproof* gene". Applicant has amended the claims to overcome the rejection.

Written description

Claims 1, 4-8 and 17-22 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement.

Examiner states that while the claims are broadly drawn, the specification provides no guidance regarding the isolation of any protein (or other gene product) from any source or of any sequence which could confer any of the "mitigating" traits. Examiner further states that the single exemplified dwarfism trait was deleterious to the cultivated crop. Examiner also states that no guidance is presented in the specification regarding the identification or isolation of single genes which convert the advantageous traits.

Examiner states that given the claim breadth and lack of guidance, the specification fails to provide and adequate written description of the genus of sequences as broadly claimed. Given the lack of written description of the claimed genus of sequences, any method of using them, such as transforming plant cells and plants therewith, and the resultant products including the claimed transformed plant cells and plants containing the genus of sequences, would also be inadequately described. Examiner concludes that accordingly, one skilled in the art would not have recognized applicant to have been in possession of the claimed invention at the time of filing

Applicant wish to point out that along the specification the putative genes have been identified in a way that would convey one skilled in the art that the inventors at the time the application was filed had possession of the claimed invention.

Regarding the mitigating traits, applicant has identified at least the following genes or sequences: secondary dormancy GenBank accession numbers AB01760, AB01761 and AB01762 (published patent application page 15 right side column paragraph 0115); s*hatterproof* gene of *Brassica* with GenBank Accession number AAK00646 (published patent application page 16 left side column paragraph 0118) as well as GenBank Accession number AF226865; dwarfing genes with GenBank Accession numbers AF044216, BT 002093 and AY128389 (published patent application page 16, right side column paragraph 0124) as well as *delta gai* with accession number AY142002 (published application page 19 paragraph 0140), anti-bolting genes such as GenBank accession numbesr NM122491, AY46224, NM106491m NM129007, AJ315663, AY242858 and BG59238 (published patent application page 30 paragraph 0220).

Regarding advantageous traits, applicant has identified a number of traits and genetic elements with their sources in table 2. Moreover, table 3 lists a number of advantageous traits, with genetic elements and APHIS number of the oilseed rape that has been transformed with the trait in question. Similarly table 5 lists a number of advantageous traits, genetic elements and APHIS number of corn plants that have been transformed with the elements. Specifically in Example 1, the advantageous trait is herbicide resistance conferred by *ahas* gene (GenBank Accession number X51514). In Example 3 applicant also has specifically listed GeneBank Accession numbers AF134134-134146, AADF117710, and AY290398 as advantageous genes.

Regarding Examiner's statement that the single exemplified dwarfism trait was deleterious to the cultivated crop: In previous office action reply applicant has explained how the mitigation traits turn the plants less productive when growing as weeds and how the productivity was only higher when cultivated. Applicant has clearly shown in the specification and in the subsequent publication (Al Ahmad et al. 2004) that the yield of the crop was nearly doubled, when cultivated without competition from weeds or the wild type variety, which is the typical and optimal agronomic setting. Applicant also wish to remind that dwarfism is the basis of the green revolution, which more than doubled yields in rice and wheat for over 2 billion people in India and China. Examiner is respectfully requested not to ignore this rather large scale, long-term proof of the value of dwarfing.

Examiner maintains on this office action page 6-7 that the planting of transgenic cultivated crops randomly interspersed with wild-type plants also simulates field conditions when weeds are present, since weeds are not planted in orderly rows. Examiner thus states that under such conditions, the transgenic crop plants had lower fitness and in many cases did not produce seed, both of which traits were deleterious to the crop plant.

Applicant wishes to point out here that generally speaking in modern agriculture, the goal is to keep the field free of weeds. In such conditions, the transgenic crop plant according

to this disclosure, containing for example dwarfism gene as the mitigating gene, would provide better yield than a non transgenic plant in a weed free field. The situation described above by Examiner is actually akin to the situation when dropped seeds of a crop become what is called by agronomist as a "volunteer" weed in a different crop in the following season. According to this disclosure such volunteer weeds would be unfit and this is precisely what the farmer wants and needs.

A major worry of instances that oppose cultivation of transgenic plants is that the transgenes disperse into the wild nature via hybridization with weed species. This situation is exemplified in the current disclosure with an experiment where the transgenic hybrids with weed plants were cultivated in random setting –resembling the randomness of plant placement in the nature. In such a situation the mitigating gene was detrimental to the plants – plants did not flower or produce seeds and thereby they were not able to disperse the transgene further into the nature, precisely what is needed.

Applicant believes that Examples 1 and 2 along with this explanation should assure Examiner of the fact that the mitigating dwarfism gene was not deleterious for the cultivated plants but renders weedy hybrids unable to compete in nature.

Examiner further states that regarding the suggested mitigating genes in the specification, they are drawn to protein-encoding sequences, which the claims are broadly drawn to any type of sequence which confers the trait, including antisense RNA-encoding sequences and ribozyme sequences, which have not been described. Furthermore, Examiner states that Applicant admits that the genes conferring some of the claimed mitigating traits, such biennial growth, have not been isolated (e.g. page 31 of the specification, bottom paragraph), and so cannot be described. Applicant points out that biennial growth is controlled by gibberellic acid –using an anti-gibberllic synthesis gene (e.g. anti-kaurene oxidase) will force an annual plant into a biennial. However, applicant has amended claims 1 and 19 so that mitigating genes are limited to dwarfism, anti-bolting and anti-shattering, which are well exemplified in the specification.

Applicant has amended claims 1 and 19 and believes that in light of the above explanation the amended claims are allowable and the rejection is moot.

Enablement

Claims 1, 4-9 and 17-22 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. Examiner states that while the claims are broadly drawn to constructs comprising a multitude of genes of a multitude of sequences and from a multitude of sources, the specification does not provide guidance regarding identification or isolation of single gene which confer the advantageous traits. Examiner states that traits such as "high productivity", "modified agronomic quality" and "enhanced yield" are conferred by multiple genetic loci. Examiner states that it would be impossible to closely link a single gene conferring a mitigating trait to a multitude of quantitatively inherited genes conferring the advantageous traits listed above. Applicant wishes to point out that not all advantageous traits such as high productivity, modified agronomic quality and enhanced yield are conferred by multiple loci. There are various examples in the literature showing enhanced yield due to introduction of one single gene (e.g. see the large number of such single gene yield enhancing genes of the APHIS website of transgenic plants being field tested: http://www.isb.vt.edu/cfdocs/fieldtests2.cfm). Moreover, experts in the scientific community also disagree with the view of Examiner – once held by many, but overturned by evidence on the contrary – see e.g. Current Opinion in Biotechnology; Vol. 16, Issue 2, April 2005, Pages 147-153. Yield enhancement genes: seeds for growth. Wim Van Camp, CropDesign NV, Gent, Belgium: "Yield is a multifactorial trait, integrating various developmental and physiological processes. Despite this, complexity, evidence is mounting that yield can be increased by the genetic modification of single genes".

Modified agronomic quality may similarly be conferred by single genetic loci (e.g. altered oil profile or protein quality). Table 2 of the instant specification provides a list of advantageous traits encoded by one gene. These traits have been successfully transformed to various plant species. The list included modified fatty acid content

(agronomic quality), herbicide resistance, disease resistance, virus resistance and modified ripening. One skilled in the art would be able to choose an advantageous gene and transform the plants. Applicant has therefore left the list of advantageous traits in claim 1 as previously presented, however claim 19 is only toward herbicide resistance, similarly as is the new claim 23. Applicant has however, amended claim 1 so that the advantageous traits are limited to those that are encoded by one gene.

Examiner further states that the claimed process is hampered by the lack of currently available isolated genes which encode any or all of the proteins involved in the pathways responsible for traits deleterious to weeds, such as secondary dormancy, seed shattering and bolting. Examiner refers to the article of Gressel 1999 in Tibtech.

Regarding secondary dormancy: Applicant points out that the specification of the current application clearly provides means to prevent secondary dormancy (see above and published application page 15 right side column in paragraph 0115). Regarding seed shattering: see above and page 15 paragraph 0118 of the published application.

Therefore, Applicant disagrees with Examiner's conclusion that the process is hampered by lack of currently available isolated genes. Gressel –article that Examiner refers to is published in September 1999, which is well before the filing date or priority dates of this application and thus can not be trusted as the state of the art at the time the inventors filed this application.

Examiner refers to Al-Ahmad et al 2004 (page 697, Abstract), and states that the process is unpredictable as the cultivated tobacco transformation with a construct encoding gibberellic acid insensitivity conferring a dwarfing mitigating trait resulted in the deleterious effects of tobacco plant death or greatly reduced flowering. Applicant wish to clarify the essence of the current invention here and show that Al-Ahmad abstract shows exactly the same as the specification here, namely predictability of the process claimed. The basic idea of this invention is that the cultivated crop plant has a tandem construct comprising an advantageous gene and a mitigating gene. When the plants are cultivated

according to modern agricultural practices, i.e. one phenotype in rows in field that is kept free from weeds to the best one can, and with the methods available to the farmer, the transgenic tobacco plants harboring the tandem construct had more leaves, formed more flowering branches, and flowers and flowered for a longer period than the wild type plants grown alone (Al Ahmad 2004, page 706, last paragraph). Once this cultivated plant hybridizes with a wild type plant, the resulting progeny consists of plants either with no transgenes or plants that are heterozygous carrying the tandem construct. In such heterozygotes the mitigating gene showed to be deleterious: In middle of the Al-Ahmad abstract it reads: "The hemizygous semidwarf imazapyr-resistant TMT (=BC), transgenic plants were weak competitors when co cultivated with wild type segregants under greenhouse conditions and without using the herbicide". The wild type segregants here represent the wild type weed plants that do not carry the transgenes, and therefore are of no concern to anybody. The heterozygous weed plants are the concern as they could further spread the transgene into the nature, unless they are poor in their capacity to form flowers as was the case here. When hemizygous plants were grown together with wild type plants, the hemizygous plants that carry the transgene were weak competitors, did not form flowers or died (Al Ahmad 2004, Abstract). This is exactly what this invention is about: the wild type plants are the wild type plants in the nature and the hemizygous plants are the hybrids that are formed when a cultivated transgenic plant crosses with a wild type relative. These hemizygous plants are the 'dangerous' ones that may continue to spread the transgene further into the nature, unless they are unable to flower or are otherwise poor competitors. This invention is exactly to this point; the hybrids are not viable, they cannot properly flower, and therefore they cannot continue spreading the transgene into the nature by further crossing with wild type plants. They are viable only when coddled by cultivation and their competitors are eliminated, which is the situation in cultivated field. Applicant believes that this explanation enables Examiner to see that the process is not unpredictable and that Al-Ahmad shows actually how this process is predictable.

Examiner further notes that the transformed tobacco and *Brassica* plants obtained by Applicant did not have benign traits conferred by the mitigating genetic trait. Instead,

both the transformed dwarf tobacco and the transformed dwarf *Brassica* were inefficient competitors with wild type tobacco or *Brassica* (Examiner refers to page 62 of specification, bottom two paragraphs, and page 71, penultimate paragraph). Examiner states that both homozygous transgenic tobacco and homozygous transgenic *Brassica* failed to produce flowers as well.

Applicant wish to clarify here, what is meant by benign trait in the context of this invention. A benign trait is a trait that does not negatively affect the plant under cultivation. Specification in paragraph 0135 of the published application define phrase 'Mitigating genetic trait' as to any inheritable trait which is deleterious when expressed in an undesirable, interbreeding species (weed) of the commercially cultivated crop, but is benign or advantageous when expressed in the commercially cultivated crop." 'Commercially cultivated crop' is crop that is cultivated under modern agricultural settings, i.e. one phenotype grown in rows in a field substantially free from weeds. In the cases presented, the plants have been genetically engineered to have an herbicide resistance gene that allows cost-effective elimination of weeds. The two last paragraphs of page 62 go exactly to this point: the transgenic plants were more productive than wild type plants. Therefore, the trait was advantageous and benign- there was no harm for the plants under cultivation; on the contrary there was advantage. However, once the hemizygous transgenic plants were grown together with wild type plants in a random setting, resembling the situation in the nature, the hemizygous plants were poor competitors. Therefore, the advantage of the mitigating gene was seen only under commercial kind of cultivation while the trait was harmful in situation where the transgenic plant would need to compete with wild type relatives.

Applicant believes that this explanation enables Examiner to see how this invention works to prevent transgenes from escaping to nature through hybridization of transgenic cultivated plants with wild type relatives.

Examiner states that transgenic plants would be competitively disadvantaged as not being able to grow well when planted in a field with vigorous weeds or when mixed with some

non-transgenic seeds. Examiner concludes that Applicant has not provided any examples of crop plants transformed with a sequence conferring a truly mitigating yet benign trait.

Applicant is of the opinion that such a conclusion is truly unreasonable. First, applicant cannot see what would be the condition where a farmer would plant transgenic seeds in a field with vigorous weeds. And on the other hand as stated already above, if transgenic seeds would by mistake drop to wilderness, the method of this inventions prevents introgression of transgenes into the wild type relatives, which is exactly what is wanted. Moreover, applicant cannot see why transgenic seeds would be purposefully mixed with nontransgenic seeds of the same species or cultivar. If transgenic seeds were mixed with nontransgenic seeds of different species- there is no showing that the transgenic plants could not survive and produce well. Applicant also wishes to point out that there is no requirement for the applicant to prove that the claimed method works in every imaginary situation, especially when the imaginary situation current past and probably future preferred agronomic situations. The invention claimed is toward a method to provide a mitigation to effects of introgression of at least one advantageous genetically engineered trait to an uncultivated interbreeding species related to the transformed cultivated crop, and the examples provided in the specification show such traits that are mitigating and benign in conditions where the weedy plants are related to the transformed cultivated crop. Therefore, applicant respectfully traverses the rejection.

Examiner further states that what constitutes a "weed" is variable and crop-species dependent. Examiner states that for example plants of the cultivated beet species may be considered weeds when they are volunteers which have resulted from seed left it the field the previous season. Examiner further states that what constitutes a trait which is deleterious to a weed (or which is benign or valuable to a crop species) will depend upon the particular crop plant species and the particular weed species, as well as fluctuating environmental stressors. Applicant wish to point out again that this invention is toward a method to provide mitigation to effects of introgression of at least one advantageous genetically engineered trait to an uncultivated interbreeding species related to the transformed cultivated crop. Therefore, what weed is in the context of this invention is a

wild type plant that is related to the crop plant and capable of hybridizing with the transgenic plant.

Examiner further refers to Desplanque et al. and states that bolting, rather than being deleterious as claimed in claim 3, is an attractive trait for weed beets and their wild relatives. Applicant first wish to point out that claim 3 has been canceled. Moreover, the deleterious or benign trait that this invention describes is antibolting as is evidenced in the specification in paragraphs 0219-0222, which is in accordance to the teaching of Desplanque. Applicant realizes that the claim language of claim 1 has been confusing, and applicant has amended claims 1 and 19 accordingly to refer to anti-bolting.

Examiner further states that modification of deleterious traits, such as seed coat – influenced uniform germination, is unpredictable, and that antisense RNA-mediated gene inhibition is unpredictable. Applicant has amended the claims by deleting reference to these traits, without admission of the unpredictability of these traits.

Examiner states that given the claim breadth, unpredictability, and lack of guidance, undue experimentation would have been required by one skilled in the art to identify, isolate and evaluate a multitude of genes encoding non-exemplified gene products such as antisense RNA and/or conferring benign or valuable traits to a multitude of cultivated crop species transformed therewith, but deleterious traits to a multitude of weedy species transformed therewith. Applicant has amended the claims 1 and 19 to narrow the claims and canceled claims 6 and 8 and believes that the amended claims are allowable and the rejection is moot. Applicant wish also to point out that the genes for these traits are all known and sequenced genes, and anyone skilled in the art can take these genes and make constructs in the anti-sense or RNAi forms, with off the shelf kits containing the necessary parts.

Anticipation

Claims 1 and 19 are rejected under 35 U.S.C. 102 (e) as being anticipated by Lee et al.

Examiner states that Lee et al teach method for transforming cultivated turf grass plants with a first gene encoding herbicide resistance and a second gene encoding male sterility or dwarfism, wherein the two genes may be on the same 'transforming DNA' and wherein transgenic turf grass plants comprising a combination of genes conferring herbicide resistance and dwarfism or male sterility are claimed. Examiner states that two genes present in the same genetic construct to be introduced into a transformed plant would inherently be less than 10 centimorgans apart.

Applicant maintains that Lee et al does not teach transformation of cultivated crop plants with a first gene encoding herbicide resistance and second gene encoding male sterility or dwarfism, wherein the first and second gene are tightly linked with a genetic distance of not greater than 10 centimorgans from each other. To support his view Examines refers to Lee column 6, lines 17-26; column 9 line 44 through column 11, line 44; claims 1 and 15-17. By carefully reading the referred lines, the applicant cannot find evidence that Lee teaches the genes on same genetic construct; that is a concept that did not occur to Lee et al. They did not realize that having the genes in tandem would partially (in their case) affect gene flow and did not insert them in tandem. In column 6, lines 17-26 (the ones that Examiner refers to) Lee lists examples of characteristics that may be altered by genetic transformation to include herbicide resistance, disease resistance, insect resistance, drought resistance, dwarfism,[...] and combinations of any of these. Similarly claim 15 (which Examiner refers to) claims a method to produce a transgenic plant where the property is selected from the group consisting of herbicide resistance, insect resistance, dwarfism, [...] and combinations thereof. The mere wording 'and combinations thereof" does not teach that the genes are tightly linked with a genetic distance of not greater than 10 centimorgans. Applicant respectfully traverses the rejection- Examiner has used hindsight when coming to the rejection.

Applicant believes that the amended claims are allowable and the rejection is moot. Applicant has also amended a new claim 24, which limits the sequences of advantageous and mitigating genes to be juxtaposed. Support for this is found in specification (published patent application page 10 paragraph 0073).

Obviousness

Claims 1 and 7 are rejected under 35 USC 103(a) as being unpatentable over WO 97/42326 (MOGEN INTERNATIONAL) in view of Christou et al. (US 6,114,603).

Examiner states that it would have been obvious to one of ordinary skill in the art to utilize the method of sugarbeet transformation with antibolting gene as taught by MOGEN INTERNATIONAL, and to modify that method by incorporation the bialaphos resistance gene taught by Christou et al, as suggested by MOGEN INTERNATIONAL. Examiner relies into MOGEN INTERNATIONAL showing TPP gene conferring antibolting to lettuce and according to Examiner would inherently confer anti-bolting to the biennial sugarbeet. Applicant regards this as a far fetched conclusion, because TPP is an essential gene in regulation of source-sink relationships. Therefore, what is seen in transgenic lettuce may be completely different than in transgenic sugarbeet, because lettuce is bred to provide substantial leaf mass while sugarbeet is bred to provide high sugar concentration in the root. Therefore, effects of a gene that regulates source sink relations is not necessarily same in these plant species. There is nothing in MOGEN INTERNATIONAL to show or to suggest that TPP would be an antibolting gene in sugarbeet.

Moreover, applicant wishes to point out that MOGEN INTERNATIONAL teaches nothing about herbicide resistance- they used only antibiotic resistance genes as selectable markers (see Figure 1 and examples therein).

Examiner states that even if MOGEN INTERNATIONAL does not actually teach sugarbeet plants transformed with a gene conferring bialaphos resistance, but that

Christou et al teach sugarbeet transformation with a gene conferring bialaphos resistance. Examiner now concludes that it would have been obvious to one of ordinary skill in the art to utilize the method of sugarbeet transformation with an antibolting gene as taught by MOGEN INTERNATIONAL and modify the method by incorporating the bialaphos resistance gene taught by Christou et al. Examiner continues that two gene present on the same genetic construct to be introduced into a transformed plant would inherently be less than 10 centimorgans. As stated above, MOGEN INTERNATIONAL does not teach transformation of sugarbeet with antibolting gene and does not even suggest that TPP would cause antibolting in sugarbeet. Therefore, applicant respectfully traverses Examiner's rejection.

Claims 1 and 8 are rejected under 35 USC 103(a) as being unpatentable over WO 97/301 162 (FORBIO RESEARCH) in view of Boudet et al (U.S. Patent 5,451,514). Examiner states that it would have been obvious to one of ordinary skill in the art to utilize the method of eucalyptus transformation with a male-specific promoter operably linked to a cytotoxin gene as taught by FORBIO RESEARCH, and to modify that method by incorporation a gene modifying lignin content as taught by Boudet et al, as suggested by each reference. Applicant wishes to point out that FORBIO RESEARCH used a gene encoding barnase, which is a ribonuclease, which under the control of a promoter that expresses it during pollen production, renders plants male sterile. Such plants can be pollinated by wild or weedy relatives, and thus would not prevent transgene introgression, and thus nothing is taught of value about its use in mitigating gene flow. Applicant therefore respectfully traverses Examiner's rejection.

Claims 1, 5, and 19-22 are rejected under 35 USC 103(a) as being unpatentable over Dietrich et al. (US 5,731,180) in view of WO 97/291123 (JOHN INNES CENTRE).

Examiner states that Dietrich et al teach plant transformation with mutated AHAS-encoding gene conferring resistance to imidazolinone herbicide, suggest the linkage of another gene of interest to the mutant *ahas* gene including a gene, which confers an

agronomic trait, and further suggests the transformation of a multitude of plant species including tobacco and *Brassica.*

Examiner further states that Dietrich et al do not teach plant transformation with a closely linked dwarfism gene, but that JOHN INNES CENTER teaches *Brassica* and tobacco transformation with the mutant *delta-gai* gene, and suggest the co-transformation of a marker gene including a gene encoding AHAS conferring herbicide resistance. Examiner conclude that it would have been obvious to one of ordinary skill in the art to utilize the method of plant transformation with a mutant that has gene conferring herbicide resistance as taught by Dietrich et al, and to modify that method by incorporating *Brassica* or tobacco transformation and the mutant *gai* gene tightly linked to the *ahas* gene as taught by JOHN INNES CENTER, as suggested by each reference. Examiner states that the genetic distance of 10 centimorgans or less would have been an inherent property of the construct suggested by each reference.

Applicant wishes to point out here that even if Dietrich discloses plant transformation with *ahas* gene to produce herbicide resistant plants, they do suggest linking a gene of interest only for the purpose of having herbicide resistance as a selection marker (column 7 line 5-10). JOHN INNES CENTRE discloses GAI gene of *Arabidopsis thaliana.* The patent application also suggests use of selectable markers for the process of selecting transformed individuals. These include antibiotic resistance genes as well as herbicide resistance genes, yet in the examples there was not mention of any selectable marker being used. Even if combination of Dietrich and JOHN INNES CENTRE disclosures would provide use of *ahas* gene as a selectable marker for transforming a plant with GAI gene, it would not provide the idea of mitigation as disclosed in this invention. Such genes could be inserted separately or in tandem to achieve both traits, but only forethought could realize that there might be a value in combining such traits in tandem and that there might be an effect on the mitigation of transgenes, which Applicant were first to propose and demonstrate experimentally. Therefore, applicant strongly disagrees with the claim that the Dietrich and JOHN INNES would make the current invention obvious as Examiner alleges.

Examiner states that claims 4, 5, and 17 -18 are deemed free of prior art, given the failure of the prior art to teach or reasonably suggest either isolated gene conferring the variously recited mitigating or advantageous traits, or plant transformation with the two genes on the same genetic construct (i.e. tightly linked no more than 10 centimorgans apart).

Examiner further states that the following subject matter would be allowable: claims drawn to a method using the *shatterproof* gene as the mitigating construct, tightly linked no more than 10 centimorgans away from an advantageous gene which encodes a protein, wherein said advantageous gene confers a trait selected from the group consisting of herbicide resistance; disease, insect or nematode resistance, environmental stress resistance; bioremediation; expression of heterologous products and genetically modified plant products. Applicant has amended new claim 23 to this effect.

Applicant believes that based on the above arguments allowable subject matter should also include dwarfism and anti-bolting genes and therefore applicant has amended claims accordingly.

Conclusion

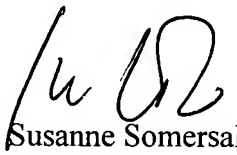
Applicant has replied to each rejection of the Examiner and believes that the amended claims in view of the above arguments are allowable.

If a telephone conference or interview in person would expedite prosecution of this application, the Examiner is invited to telephone the undersigned at 202-463 3275.

Respectfully submitted

DODDS AND ASSOCIATES

By:



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